



TORQ Analysis of Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic to Printing Machine Operators

INPUT SECTION:

Transfer	Title	O* NET	Filters		
From Title:	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	51-4031.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Printing Machine Operators	51-5023.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

OUTPUT SECTION:

Grand TORQ:

91

Ability TORQ				Skills TORQ				Knowledge TORQ			
Level		<div></div> 88		Level		<div></div> 93		Level		<div></div> 94	
Gaps To Narrow if Possible				Upgrade These Skills				Knowledge to Add			
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt
Visual Color Discrimination	45	22	58	Equipment Maintenance	63	11	71	No Knowledge Upgrades Required!			
Near Vision	45	1	61	Operation and Control	66	7	77				
				Operation Mbnitoring	64	6	75				
				Reading Comprehension	51	2	70				

LEVEL and IMPT (IMPORTANCE) refer to the Target Printing Machine Operators. GAP refers to level difference between Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic and Printing Machine Operators.

ASK ANALYSIS

Ability Level Comparison - Abilities with importance scores over 50

Description	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	Printing Machine Operators	Importance
Near Vision	44	45	61
Visual Color Discrimination	23	45	58
Control Precision	50	41	57
Manual Dexterity	46	37	55
Information Ordering	45	38	51
Visualization	49	38	50



Skill Level Comparison - Abilities with importance scores over 69

Description	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	Printing Machine Operators	Importance
Operation and Control	59	66	77
Operation Monitoring	58	64	75
Troubleshooting	58	55	73
Equipment Maintenance	52	63	71
Reading Comprehension	49	51	70

Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	Printing Machine Operators	Importance
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Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	Printing Machine Operators	Description	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	Printing Machine Operators
10+ years	0%	0%	Doctoral	0%	0%
8-10 years	0%	3%	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	0%	7%	Master's Degree	0%	0%
2-4 years	0%	24%	Post-Bachelor Cert	0%	0%
1-2 years	11%	13%	Bachelors	0%	0%
6-12 months	17%	3%	AA or Equiv	0%	0%
3-6 months	9%	6%	Some College	0%	5%
1-3 months	19%	0%	Post-Secondary Certificate	1%	8%
0-1 month	8%	0%	High School Diploma or GED	79%	85%
None	33%	39%	No HSD or GED	18%	1%

Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic

Printing Machine Operators

Most Common Educational/Training Requirement:

Moderate-term on-the-job training

Moderate-term on-the-job training

Job Zone Comparison

2 - Job Zone Two: Some Preparation Needed

Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.

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These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.

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Tasks

Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic

Core Tasks

Generalized Work Activities:

- Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Identifying Objects, Actions, and Events - Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.

Specific Tasks

Occupation Specific Tasks:

- Adjust ram strokes of presses to specified lengths, using hand tools.
- Clean and lubricate machines.
- Examine completed workpieces for defects such as chipped edges and marred surfaces, and sort defective pieces according to types of flaws.
- Grind out burrs and sharp edges, using portable grinders, speed lathes, and polishing jacks.
- Hand-form, cut, or finish workpieces, using tools such as table saws, hand sledges, and anvils.
- Hone cutters with oilstones to remove nicks.
- Install, align, and lock specified punches, dies, cutting blades or other fixtures in rams or beds of machines, using gauges, templates, feelers, shims, and hand tools.
- Load workpieces, plastic material, or chemical solutions into machines.

Printing Machine Operators

Core Tasks

Generalized Work Activities:

- Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.

Specific Tasks

Occupation Specific Tasks:

- Apply glue or tape to holes in screens in order to repair leaks.
- Attach cloth to take-up rollers, placing it in feeding position and threading it through equipment as necessary.
- Blend and test paint, inks, stains, and solvents according to types of material being printed and work order specifications.
- Clean and lubricate printing machines and components, using oil, solvents, brushes, rags, and hoses.
- Coordinate printing activities with activities of workers who set up, clean, and feed machines.
- Correct misprinted materials, using materials such as ink eradicators or solvents.
- Direct and monitor activities of workers feeding, inspecting, and tending printing machines and materials.
- Examine job orders to determine details



chemical solutions into machines.

- Lubricate workpieces with oil.
- Mark identifying data on workpieces.
- Measure completed workpieces to verify conformance to specifications, using micrometers, gauges, calipers, templates, or rulers.
- Place workpieces on cutting tables, manually or using hoists, cranes, or sledges.
- Plan sequences of operations, applying knowledge of physical properties of workpiece materials.
- Position guides, stops, holding blocks, or other fixtures to secure and direct workpieces, using hand tools and measuring devices.
- Position, align, and secure workpieces against fixtures or stops on machine beds or on dies.
- Preheat workpieces, using heating furnaces or hand torches.
- Read work orders and production schedules to determine specifications, such as materials to be used, locations of cutting lines, and dimensions and tolerances.
- Remove housings, feed tubes, tool holders, and other accessories in order to replace worn or broken parts such as springs and bushings.
- Replace defective blades or wheels, using hand tools.
- Scribe reference lines on workpieces as guides for cutting operations, according to blueprints, templates, sample parts, or specifications.
- Select, clean, and install spacers, rubber sleeves, and cutters on arbors.
- Set blade tensions, heights, and angles to perform prescribed cuts, using wrenches.
- Set stops on machine beds, change dies, and adjust components, such as rams or power presses, when making multiple or successive passes.
- Set up, operate, or tend machines to saw, cut, shear, slit, punch, crimp, notch, bend, or straighten metal or plastic material.
- Sharpen dulled blades, using bench grinders, abrasive wheels, or lathes.
- Start machines, monitor their operations, and record operational data.
- Test and adjust machine speeds and actions, according to product specifications, and using gauges and hand tools.
- Thread ends of metal coils from reels through slitters, and secure ends on recoilers.
- Turn controls to set cutting speeds, feed rates, and table angles for specified operations.
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such as quantities to be printed, production times, stock specifications, colors, and color sequences.

- Input instructions in order to program automated machinery, using a computer keyboard.
- Inspect and examine printed products for print clarity, color accuracy, conformance to specifications, and external defects.
- Load, position, and adjust unprinted materials on holding fixtures or in equipment loading and feeding mechanisms.
- Maintain records of goods produced, supplies used, production costs, and machine maintenance and repair activities.
- Measure screens, and use measurements to center and align screens in proper positions and sequences on machines, using gauges and hand tools.
- Monitor and control operation of auxiliary equipment used to assemble and finish products.
- Monitor feeding, printing, and racking processes of presses in order to maintain specified operating levels and to detect malfunctions; make any necessary adjustments.
- Monitor stocks of materials such as paper, ink, and metal in order to maintain supplies during equipment operation.
- Operate equipment at slow speed to ensure proper ink coverage, alignment, and registration.
- Pack and label cartons, boxes, or bins of finished products.
- Place printed items in ovens to dry or set ink.
- Place spools of thread or wire on holders, and thread through machines.
- Position knives at specified distances from edges of plastic material in order to trim excess material from edges.
- Pour ink into pans, and smooth paint onto stencils, using flat-bladed knives.
- Pour or spread paint, ink, color compounds, and other materials into reservoirs, troughs, hoppers, or color holders of printing units, making measurements and adjustments to control color and viscosity.
- Prepare and treat lithographic plates with various chemicals to clean and preserve plates and fix images.
- Provide assistance in the design and layout of forms and materials to be printed.
- Push buttons, turn handles or move controls and levers to start and control printing machines.
- Remove printed materials from presses, using handtrucks, electric lifts, or hoists, and transport them to drying, storage or finishing areas.



vent valves to start flow or coolant against cutting areas and to start airflow that blows cuttings away from kerfs.

Detailed Tasks

Detailed Work Activities:

- adjust production equipment/machinery setup
- attach or mark identification onto products or containers
- clean equipment or machinery
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- install equipment or attachments on machinery or related structures
- load or unload material or workpiece into machinery
- maintain or repair industrial or related equipment/machinery
- measure, weigh, or count products or materials
- monitor production machinery/equipment operation to detect problems
- move or fit heavy objects
- operate hoist, winch, or hydraulic boom
- operate metal or plastic fabricating equipment/machinery
- perform safety inspections in manufacturing or industrial setting
- plan or organize work
- read blueprints
- read production layouts
- read specifications
- read technical drawings
- read work order, instructions, formulas, or processing charts
- recognize characteristics of metals
- set up computer numerical control machines
- set up production equipment or machinery
- understand machine setup instructions
- understand technical operating, service or repair manuals
- use hand or power tools
- use precision measuring tools or equipment

- Repair, maintain, or adjust equipment.
- Reposition printing plates, adjust pressure rolls, or otherwise adjust machines to improve print quality, using knobs, handwheels, or hand tools.
- Requisition supplies, materials, and equipment, and receive stock when it arrives.
- Select and install printing plates, rollers, feed guides, gauges, screens, stencils, type, dies, and cylinders in machines according to specifications, using hand tools.
- Set and adjust speed, temperature, ink flow, and positions and pressure tolerances of equipment.
- Squeeze or spread ink on plates, pads, or rollers, using putty knives, brushes, or sponges.
- Thin printing compounds, using specified thinners.

Detailed Tasks

Detailed Work Activities:

- adjust production equipment/machinery setup
- assure quality control in printing processes
- attach or mark identification onto products or containers
- clean equipment or machinery
- collect payment
- demonstrate or explain assembly or use of equipment
- determine film exposure settings
- determine specifications
- develop film or other photographic medium
- direct and coordinate activities of workers or staff
- distinguish colors
- examine products or work to verify conformance to specifications
- fabricate printing plates
- identify color or balance
- install equipment or attachments on machinery or related structures
- load or unload material or workpiece into machinery
- load, unload, or stack containers, materials, or products
- maintain consistent production quality
- maintain or repair industrial or related equipment/machinery
- maintain production or work records
- measure, weigh, or count products or materials
- mix paint, ingredients, or chemicals, according to specifications



- mix printing solutions
- monitor production machinery/equipment operation to detect problems
- move or fit heavy objects
- operate bindery equipment
- operate cameras
- operate fabric printing equipment
- operate graphic reproduction equipment
- operate hoist, winch, or hydraulic boom
- operate printing equipment/machinery
- operate scanner
- perform safety inspections in manufacturing or industrial setting
- process photographic prints
- read production layouts
- read specifications
- read work order, instructions, formulas, or processing charts
- receive customer orders
- restore photographs
- retouch negatives or prints
- set page layout or composition
- set up production equipment or machinery
- strip negatives
- understand technical operating, service or repair manuals
- use color analyzer
- use densitometer
- use desktop publishing software
- use hand or power tools
- use precision measuring tools or equipment

Tools - Examples

- Adjustable wrenches
- Materials conveyors
- Conductivity indicators
- Densitometers
- Desktop computers
- Flexo presses
- Grease guns
- Claw hammers
- Hand trucks
- Packing gauges
- Hoists
- Pallet jacks



- Letter presses
- Electric lifts
- Vise grip pliers
- Hand-held magnifiers
- Micrometers
- Offset printing equipment
- Paper drills
- Paper joggers
- Perforators
- Personal computers
- pH indicators
- Digital copiers
- Gravure presses
- Platemaking equipment
- Folding equipment
- Collating equipment
- Cutting equipment
- Multicolor presses
- Putty knives
- Ratchets
- Phillips head screwdrivers
- Screen printing presses
- Stackers
- Stapling machines
- Measuring tapes
- Strappers

Labor Market Comparison

Description	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	Printing Machine Operators	Difference
Median Wage	\$ 27,500	\$ 29,710	\$ 2,210
10th Percentile Wage	\$ 17,200	\$ 21,270	\$ 4,070

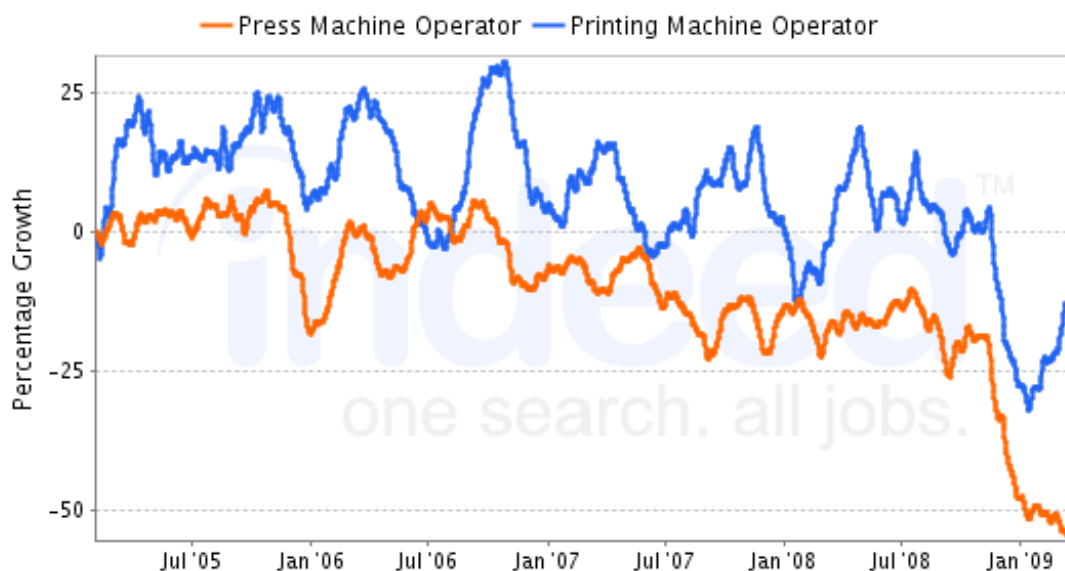
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 31,510	\$ 36,080	\$ 4,570
90th Percentile Wage	\$ 37,720	\$ 44,010	\$ 6,290
Mean Wage	\$ 27,250	\$ 30,870	\$ 3,620
Total Employment - 2007	450	790	340
Employment Base - 2006	461	820	359
Projected Employment - 2016	395	798	403
Projected Job Growth - 2006-2016	-14.3 %	-2.7 %	11.6 %
Projected Annual Openings - 2006-2016	11	18	7

National Job Posting Trends

Trend for Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic

Trend for
Printing
Machine
Operators

Job Trends from Indeed.com



Data from [Indeed](http://Indeed.com)

Recommended Programs

Printing Management

Printing Management. A program that prepares individuals to apply technical and managerial knowledge and skills to the processes and procedures of managing printing operations from initial design through finished product distribution. Includes instruction in the principles of graphic communications design and production; quality control; printing operations management; computerization; printing plant management; business finance and marketing; logistics and distribution; personnel supervision and leadership; and professional standards in the graphic communications industry.

No schools available for the program

Graphic and Printing Equipment Operator, General Production



Graphic and Printing Equipment Operator, General Production. A program that generally prepares individuals to apply technical knowledge and skills to plan, prepare, and execute a variety of commercial and industrial graphic communications jobs. Includes instruction in the operation and maintenance of mechanical, electronic, and digital graphic, printing, and finishing equipment; and related processes.

Institution	Address	City	URL
Central Maine Community College	1250 Turner St	Auburn	www.cmcc.edu
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Printing Press Operator

Printing Press Operator. A program that prepares individuals to apply technical knowledge and skills to set up, operate, and maintain printing presses.

No schools available for the program

Graphic Communications, Other

Graphic Communications, Other. Any instructional program in graphic communications not listed above.

No schools available for the program

Maine Statewide Promotion Opportunities for Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings
51-4031.00	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	100	2	450	\$27,500.00	\$0.00	-14%	11
51-4193.00	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	93	2	120	\$32,160.00	\$4,660.00	16%	5
51-4122.00	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	92	2	120	\$36,960.00	\$9,460.00	2%	3
51-5023.00	Printing Machine Operators	91	2	790	\$29,710.00	\$2,210.00	-3%	18
51-9032.00	Cutting and Slicing Machine Setters, Operators, and Tenders	84	2	710	\$31,350.00	\$3,850.00	-23%	12
51-9041.00	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	84	2	260	\$28,330.00	\$830.00	-7%	5



51-9191.00	Cementing and Gluing Machine Operators and Tenders	84	1	80	\$27,620.00	\$120.00	-15%	2
51-2041.00	Structural Metal Fabricators and Fitters	83	3	680	\$36,030.00	\$8,530.00	5%	15
51-9196.00	Paper Goods Machine Setters, Operators, and Tenders	83	2	910	\$38,230.00	\$10,730.00	-26%	23
51-5021.00	Job Printers	82	3	140	\$31,890.00	\$4,390.00	-10%	2
51-2031.00	Engine and Other Machine Assemblers	82	3	20	\$29,010.00	\$1,510.00	-45%	1
51-4034.00	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	82	3	110	\$34,350.00	\$6,850.00	-9%	2
51-4121.07	Solderers and Brazers	82	2	1,610	\$38,030.00	\$10,530.00	7%	49
51-2021.00	Coil Winders, Tapers, and Finishers	81	2	90	\$31,910.00	\$4,410.00	-53%	1
51-4023.00	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	81	2	0	\$33,460.00	\$5,960.00	0%	0

Top Industries for Printing Machine Operators

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Printing and related support activities	323100	50.92%	100,610	90,254	-10.29%
Newspaper publishers	511110	7.59%	14,990	12,841	-14.33%
Converted paper product manufacturing	322200	6.58%	12,998	10,908	-16.08%
Advertising and related services	541800	3.23%	6,387	7,207	12.83%
Plastics product manufacturing	326100	2.76%	5,460	5,788	6.00%
Specialized design services	541400	1.92%	3,793	5,076	33.81%
Textile and fabric finishing and fabric coating mills	313300	1.66%	3,277	2,021	-38.33%
Self-employed workers, primary job	000601	1.45%	2,864	3,052	6.54%
Employment services	561300	1.41%	2,783	3,522	26.56%
Colleges, universities, and professional schools, public and private	611300	0.89%	1,761	1,970	11.87%
Animal slaughtering and processing	311600	0.86%	1,706	1,947	14.13%



Paper and paper product merchant wholesalers	424100	0.80%	1,585	1,693	6.83%
Self-employed workers, secondary job	000602	0.74%	1,465	1,459	-0.45%
Cut and sew apparel manufacturing	315200	0.64%	1,266	534	-57.77%
Clothing stores	448100	0.61%	1,203	1,263	4.97%

Top Industries for Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Employment services	561300	10.95%	29,744	36,424	22.46%
Motor vehicle parts manufacturing	336300	10.08%	27,394	19,628	-28.35%
Architectural and structural metals manufacturing	332300	8.80%	23,910	22,983	-3.88%
Forging and stamping	332100	6.81%	18,517	13,040	-29.57%
Plastics product manufacturing	326100	5.31%	14,440	13,775	-4.60%
Other fabricated metal product manufacturing	332900	3.61%	9,822	7,833	-20.26%
Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing	333400	2.93%	7,972	6,600	-17.21%
Metalworking machinery manufacturing	333500	2.35%	6,374	4,697	-26.32%
Other general purpose machinery manufacturing	333900	1.82%	4,945	4,018	-18.76%
Boiler, tank, and shipping container manufacturing	332400	1.82%	4,936	4,003	-18.90%
Machine shops	332710	1.79%	4,876	3,630	-25.55%
Steel product manufacturing from purchased steel	331200	1.79%	4,869	3,878	-20.35%
Spring and wire product manufacturing	332600	1.76%	4,776	3,182	-33.37%
Agriculture, construction, and mining machinery manufacturing	333100	1.69%	4,593	3,859	-15.97%
Metal and mineral (except petroleum) merchant wholesalers	423500	1.59%	4,325	4,275	-1.16%